Constructing TB cascades to inform programme improvement
Introduction

- Treatment coverage: 54%
  New data for 2017: 68%
- Estimated losses from TB care cascade
  - 5% at test access
  - 13% at diagnosis
  - 12% at treatment initiation
  - 17% successful completion
  - Similar with HIV co-infection
- Programme monitoring has focused on treatment outcomes
  - Monitoring of case identification and diagnosis is poor

Purpose

• Implementation of the TB module of TIER.net is underway
  - Potential to close some existing monitoring gaps
  - Potential to improve integration of M&E for TB & HIV

• Aim: to construct a TB care cascade to explore whether an integrated information system can improve programme monitoring

From: Finding the Missing Tuberculosis Patients
Methods & data sources

- July – December 2017
- Johannesburg Sub-district D
  - Soweto
  - Best coverage of Tier.net TB module (2% difference between Tier & ETR)

<table>
<thead>
<tr>
<th>Data source</th>
<th>Incident cases</th>
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<tbody>
<tr>
<td>WHO: Global TB Report 2016</td>
<td>Incident cases</td>
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<tr>
<td>Tier.net</td>
<td>Presumptive TB</td>
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<td></td>
<td>TB treatment</td>
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<td>HIV co-infection</td>
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<tr>
<td>NICD TB Dashboard (district level)</td>
<td>Microbiologically confirmed pulmonary TB</td>
</tr>
</tbody>
</table>

All TB cases

- 63% of expected cases started treatment
- 58% of these completed treatment - however, system is still being implemented & more time may be needed to accurately record outcomes

147 children under 15 years old started treatment (7%)
HIV co-infection

- 62% co-infection
- About half of the HIV positive TB cases were on ART at the time of diagnosis
- 29% of overall TB case finding from within ART programme
- 24% of children under 15 years old HIV co-infected

2,088 started TB treatment

1,303 (62%) HIV positive

- 599 (46%) ART before TB episode
- 474 (36%) started ART during TB episode
- 230 (18%) not on ART
  - 207 lost to programme (transfers; deaths; LTFU)
HIV co-infection

- 100,178 people were on ART during study period- 0.6% of people on ART developed TB in 6 months
  1195/ 100,000
  - 2% were started on TB treatment within one week on ART
  - 55% between 8 and 28 days
  - 28% between 28 days and 3 months
  - 6% more than 3 months

- 3 had started IPT; none had completed IPT

- All but 6% of the people on ART who started TB treatment did so in the first 3 months
- More than half were in the first month on ART
58% of people with positive sputum samples tested by the NHLS people were started on treatment - however, capturing of microbiological tests in Tier may be incomplete.
NHLS TB Dashboard
Gaps in the TB cascade

• 63% of expected cases started TB treatment
  • Similar in HIV positive and negative cases

• Appears to be alignment with estimates in literature that case-finding gaps are significant after contact with the health services
  • 58% of estimated microbiologically-confirmed, pulmonary cases started treatment
  • These patients have made contact with the health services and are a critical area for intervention

• There are gaps in the monitoring of people being investigated for TB despite use of the TB module of TIER.net
  • Those that are recorded in the TB identification register appear to be followed and started on treatment (91% of positive tests)
  • However, there are clearly many sputum tests that are not recorded in the register
Way forward

• NHLS has expanded alerts to DS TB
  • Johannesburg with the District Department of Health has list of clients with positive sputum results Jan-Jun 2018
• Requires matching to lists of clients started in the TB module
• Missing clients will be tracked and traced
• Need to determine the reasons that clients have not started treatment
  • Sub-district and facility level analysis
  • Data collection during the tracing process
Conclusions

• An integrated HIV/TB data system allows improved understanding of the movement of clients through the TB programme
  • In our population, about half of co-infected cases were already on ART
  • The ART programme contributed about a third of all new TB cases
  • Most started TB treatment within one month of starting ART
• The TB module of TIER.net has the potential to strengthen monitoring of possible TB
  • This has not yet been realised and relies on improved use of case-identification registers and data flow in facilities
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